Ralph Hall

By David Stuhlbarg

TO Dr. Ralph E. Hall, in recognition of his distinguished service to chemistry and industry, goes the 1933 Pittsburgh Award. This Award, given for the first time last December, is to be made annually by the Pittsburgh Section of the American Chemical Society to the person who contributes the most to chemistry and humanity during the course of the year or during a series of years.

RALPH E. HALL

For the last twelve years, Dr. Hall, who received his Masters degree at Ohio State University, has done research work in the fields of boiler water reactions and the practical application of his results. He worked to determine the cause of scale formation in steam boilers and to evolve methods to prevent it from forming. He investigated corrosion, foaming, and embrittlement in the boilers. He worked out practical methods for preventing feed line scale and the cracking of boiler metal. He assembled the data on freezing-point lowering in aqueous solutions for the "International Critical Tables." He wrote and published numerous papers on his research. He wrote on the periodic system, on conductivities of aqueous solutions at high pressures, on activated carbon, and on corrosion in acid mine waters. He wrote numerous articles and theoretical and engineering reports on water conditioning. Taken all in all he has contributed more to this little known but highly important phase of physical-chemistry applied to industry than any other man.

Ralph Hall was born in Charlestown, Ohio, in 1885. He received his early schooling there and, in high school, developed a liking for chemistry and physics. This liking, coupled with a resulting desire to go deeper into these subjects, carried him to Ohio Wesleyan University where he received his Degree of Bachelor of Science in 1907.

For two years following his graduation he taught chemistry and physics in the Massillon, Ohio, High School. Here, without doubt, he gained the ability which was to stand him in good stead later in life; the ability to expound his principles to producers and manufacturers and teach them how to apply these principles evolved from his research.

In 1909 he entered Ohio State University and received his Master's degree in Chemical Engineering in 1911. He then left to accept a position as head of the chemistry department in the Toledo, Ohio, high schools. Subsequently, from 1914 to 1916 he was Fellow and associate at the University of Chicago, getting his Ph.D. degree in 1916. He served as Assistant Professor at Iowa State College for one year but left to enter the Geo-physical Laboratory of the Carnegie Institute as physical chemist. In 1920 he was appointed director of physico-research at the Firestone Tire and Rubber Company; and the following year he joined the research staff of the Koppers Company and also became Industrial Fellow of the Mellon Institute. In 1922, he went as physical chemist to the U. S. Bureau of Mines and began his classical research intto water conditioning.

In 1922, Mr. A. C. Feldman, then superintendent of the Pittsburgh Station of the Bureau of Mines, and Mr. J. P. Hopwood, President of the Hagan Corporation of Pittsburgh, drawn together by their common interest in the economic operation of steam generating plants and in the saving of fuel, decided upon a co-operative investigation into the problem at hand. Dr. Hall, in view of his commendable record and his capability for the job, was chosen to conduct this broad research. In 1926, Mr. Hopwood assumed sole responsibility for the investigations, and created Hall Laboratories, Inc., as an agency to carry on the work. A well defined procedure was established and contact was established with operating plants in order to carry its message to them. Steadily, from then on, Dr. Hall has been conducting his research and has solved many of the problems that have confronted industry.

Thus, in December, 1933, when the Pittsburgh branch of the American Chemical Society met to decide upon the Awarding of the "Pittsburgh Award," they chose Dr. Ralph E. Hall as the recipient.